

CLAIMS

1. A method of generating a list of parameter value combinations to test, the method comprising:

(a) providing to a user a graphical user interface that includes at least two adjustable probability curves that allow the user to graphically indicate the importance of values of at least first and second parameters;

(b) converting the probability curves into probability functions;

(c) combining the probability functions into a combination function; and

(d) selecting parameter value combinations that result in the combination function exceeding a predetermined probability value.

2. The method of claim 1, wherein the combination function is equal to the product of the probability functions.

3. The method of claim 1, wherein the combination function is normalized over the definition domains and is equal to:

$$\sum_{i=1}^n (2 * P(x_i) * \text{Max}(P(x_i)) - P(x_i)^2)$$

where n is the number of probability functions, $P(x_i)$ is the probability function for parameter x_i and $\text{Max}(P(x_i))$ is the maximum value of the $P(x_i)$ probability function.

4. The method of claim 1, wherein the graphical user interface in (a) allows the user to select domains for the values of the at least first and second parameters.

5. The method of claim 4, wherein a domain is selected by providing minimum and maximum values.

6. The method of claim 1, wherein (b) comprises performing polynomial curve fitting.

7. The method of claim 6, wherein the grade of the polynomial corresponds to a desired accuracy level.

8. The method of claim 1, wherein the parameters are numerical variables.

9. The method of claim 1, wherein the parameters comprise string parameters.

10. The method of claim 9, wherein a string parameter comprises length.

11. The method of claim 1, wherein the parameter combinations comprises inputs to a software module.

12. The method of claim 11, wherein the software module comprises an application programming interface.

13. The method of claim 1, wherein the parameter combinations comprise inputs to an integrated circuit.

14. A method of generating a list of parameter values to test, the method comprising:
(a) providing to a user a graphical user interface that includes an adjustable probability curve that allows the user to graphically indicate the importance of values of a parameter;
(b) converting the probability curve into a probability function; and

(c) selecting parameter values that result in the probability function exceeding a predetermined probability value.

15. The method of claim 14, wherein the probability function is a continuous function and (c) includes selecting parameter values from a group of discrete parameter values that result in the probability function exceeding a predetermined probability value.

16. In a computer system having a graphical user interface including a display and a user selection device, a method of testing a software module with parameter combinations, comprising:

- (a) displaying in a first region of the display a list of parameter combinations;
- (b) displaying in a second region of the display an input icon;
- (c) receiving an indication from a user to drag at least one of the parameter combinations to the input icon; and
- (d) in response to (c) displaying in a third region of the display an output of the software module.

17. The method of claim 16, wherein the list of parameter combinations includes parameter combination usage probabilities.